



Specifications

Bore size(mm)			10	15	20	30	40
Fluid			Air (to be filtered by 40μm filter element)				
Maximum operating pressure			0.7 MPa			1.0 MPa	
Minimum operating pressure			0.2 MPa	0.15 MPa			
Ambient and fluid temperature			5 to 60℃				
Rotation time adjustment range s/90°			0.03~0.3			0.04~0.3	0.07~0.5
Allowable kinetic energy [J]	Single vane	Without cushion	0.00015	0.00025	0.0004	0.015	0.03
		With cushion		0.001	0.003	0.02	0.04
	Double Vane		0.0003	0.0012	0.0033	0.02	0.04
Shaft load [N]		Radial load	15	15	25	30	60
		Thrust load	10	10	20	25	40
Connection size		Side ported	M3×0.5		M5×0.8		
		Axial ported					
Angle adjustable range	Single vane		0~230°	0~240°			0~230°
	Double vane		0~90°				

Ordering code

Basic type: **NCRB2 B S 20 - 180**
Built-in magnet type: **NCDRB2 B W 20 - 180**

Built-in magnet

Mounting

B	Basic type
*F	Flange type

* F: Except size 40

Suffix symbol

Symbol	Shaft type	Shaft-end shape	
		Long shaft	Short shaft
S	Single shaft	Single flat*	-
W	Double shaft	Single flat*	Single flat

* A key is used for size 40.

Bore size

10	10mm
15	15mm
20	20mm
30	30mm
40	40mm

Rotating angle

Single vane	90	90°
	180	180°
	270	270°
Double vane	90	90°
	100	100°

Vane type: **S E - □**
S □ - M9B

Vane type

S	Single vane
D	Double vane

Connecting port location

Blank	Side ported
E	Axial ported

Magnetic switch model

Blank	Without magnetic switch (Built-in magnet)
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* Refer to the right table for the model of magnetic switch.

Electrical entry/Lead wire length

Blank	0.5m	Grommet
L	3m	
C	0.5m	Connector
CL	3m	
CN	Without lead wire	

Number of magnetic switches

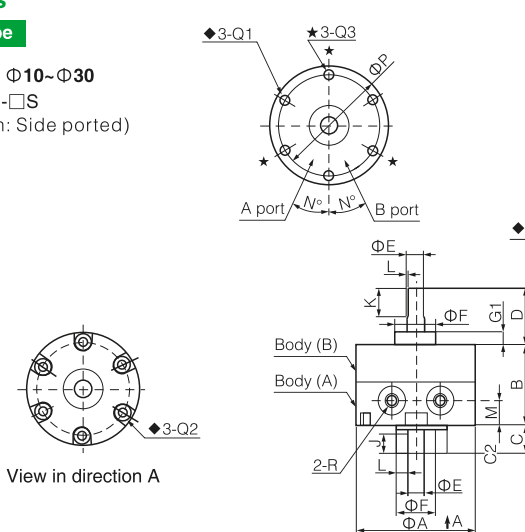
Blank	2 pcs.
S	1 pc.

Dimensions

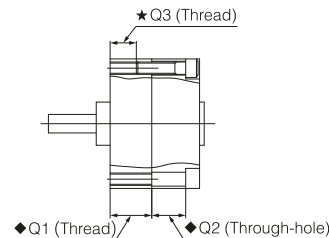
Standard Type

Single shaft / Φ10~Φ30

NCRB2BW□-□S
(Port location: Side ported)

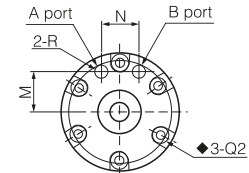
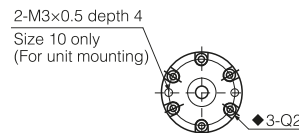


View in direction A



NCRB2BW10-□S
(Port location: Side ported)

NCRB2BW□-□SE
(Port location: Axial ported)



Model	A	B	C	D	E(g6)	F(h9)	G1	G2	J	K	L	M	N	P	◆Q1	◆Q2	★Q3	R		
																		90°	180°	270°
NCRB2BW10-□S	29	15	8	14	4 ^{-0.004} _{-0.012}	9 ⁰ _{-0.036}	3	1	5	9	0.5	5	25	24	M3(6)	3.4(5.5)	-	M5		M3
NCRB2BW10-□SE												8.5	9.5					M3		
NCRB2BW15-□S	34	20	9	18	5 ^{-0.004} _{-0.012}	12 ⁰ _{-0.043}	4	1.5	6	10	0.5	5	25	29	M3(10)	3.4(6)	M3(5)	M5		M3
NCRB2BW15-□SE												11	10					M3		
NCRB2BW20-□S	42	29	10	20	6 ^{-0.004} _{-0.012}	14 ⁰ _{-0.043}	4.5	1.5	7	10	0.5	9	25	36	M4(13.5)	4.5(11)	M4(7.5)	M5		
NCRB2BW20-□SE												14	13							
NCRB2BW30-□S	50	40	13	22	8 ^{-0.005} _{-0.014}	16 ⁰ _{-0.043}	5	2	8	12	1.0	10	25	43	M5(18)	5.5(16.5)	M5(10)	M5		
NCRB2BW30-□SE												15.5	14							

Cylinder
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

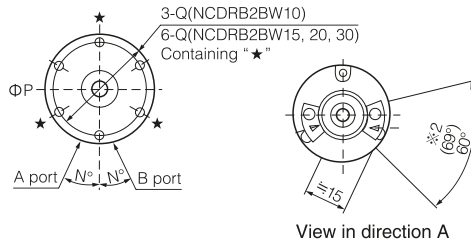
Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

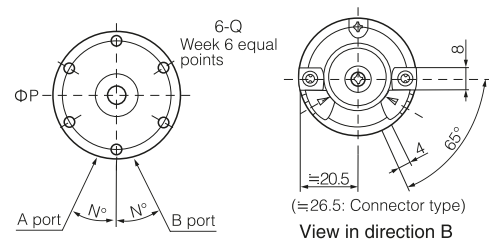
With magnetic switch

For single vane type, the figures below show actuators for 90° and 180° when B port is pressurized.

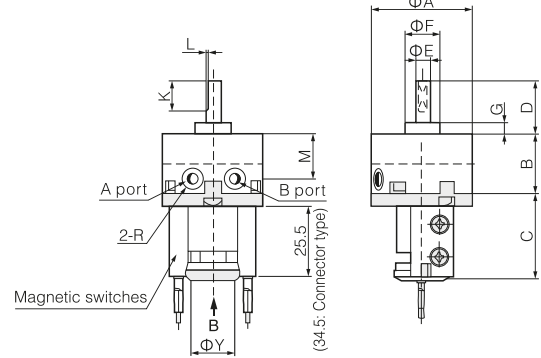
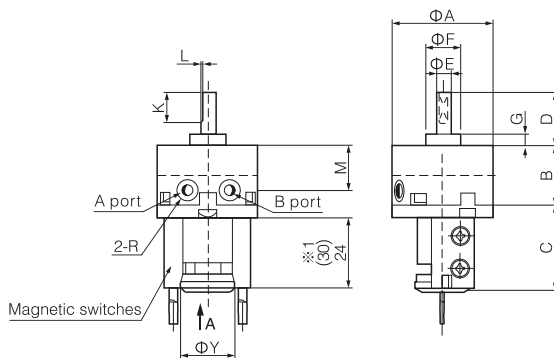
NCDRB2BW10 · 15-□S



NCDRB2BW20 · 30-□S



※ 1. The length is 24 when any of the following are used: D-90, 90A, S99(V), T99(V), S9P(V); The length is 30 when any of the following are used: D-97, 93A
※ 2. The angle is 60° when any of the following are used: D-90, 90A, 97, 93A; The angle is 69° when any of the following are used: D-S99(V), T99(V), S9P(V)
Note: In the case of magnetic switch, the position of connecting port is all on the side of cylinder block.

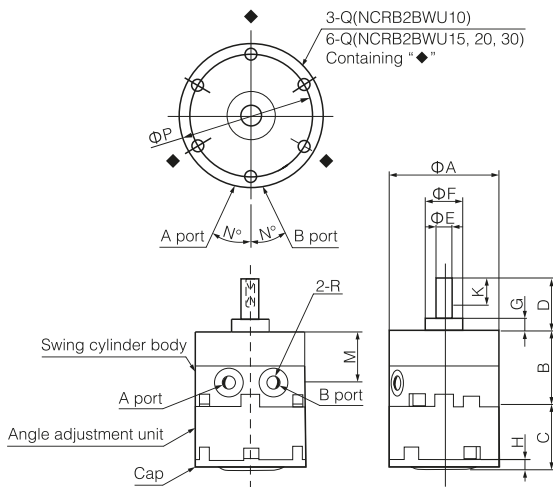


Model	A	B	C	D	E (g6)	F (h9)	G	K	L	M	N	P	Q	R			Y
														90°	180°	270°	
NCDRB2BW10-□S	29	15	29	14	4	9	3	9	0.5	10	25	24	M3×0.5 depth 5	M5×0.8	M3×0.5		18.5
NCDRB2BW15-□S	34	20	29	18	5	12	4	10	0.5	15	25	29	M3×0.5 depth 5	M5×0.8	M3×0.5		18.5
NCDRB2BW20-□S	42	29	30	20	6	14	4.5	10	0.5	20	25	36	M4×0.7 depth 7	M5×0.8			25
NCDRB2BW30-□S	50	40	31	22	8	16	5	12	1	30	25	43	M5×0.8 depth 10	M5×0.8			25

With angle adjuster

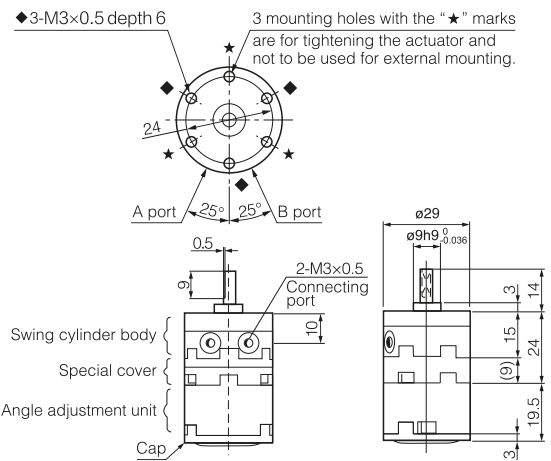
Single blade: when the drawing is used at 90°
A-port is pressurized

NCRB2BWU10 · 15 · 20 · 30-□S



Double blade: this figure shows the swing middle position when the A or B port is pressurized

NCRB2BWU10-□D



NCRB2BWU15 · 20 · 30-□D: It is the same as the outline dimension drawing and dimension table of single blade.

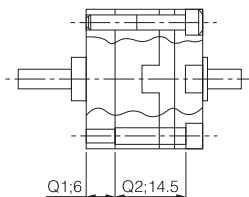
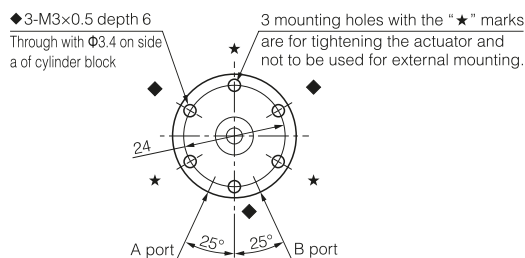
Model	A	B	C	D	E (g6)	F (h9)	G	H	K	L	M	N	P	Q	R			
															90°	100°	180°	270°
NCRB2BWU10-□S	29	15	19.5	14	4	9	3	3	9	0.5	10	25	24	M3×0.5 depth 6	M5×0.8	-	M5×0.8	M3×0.5
NCRB2BWU15-□S	34	20	21.2	18	5	12	4	3.2	10	0.5	15	25	29	M3×0.5 depth 5	M5×0.8	-	M5×0.8	M3×0.5
NCRB2BWU15-□D															M3×0.5			
NCRB2BWU20-□S	42	29	25	20	6	14	4.5	4	10	0.5	20	25	36	M4×0.7 depth 7	M5×0.8	-	M5×0.8	
NCRB2BWU20-□D															M5×0.8			
NCRB2BWU30-□S	50	40	29	22	8	16	5	4.5	12	1	30	25	43	M5×0.8 depth 10	M5×0.8	-	M5×0.8	
NCRB2BWU30-□D															M5×0.8			

Standard type

Double blade: this figure shows the middle position of swing when A port or B port is pressurized.

NCRB2BW10-□D

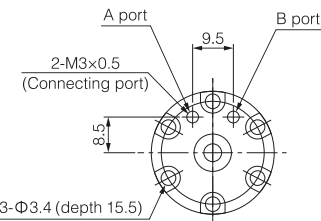
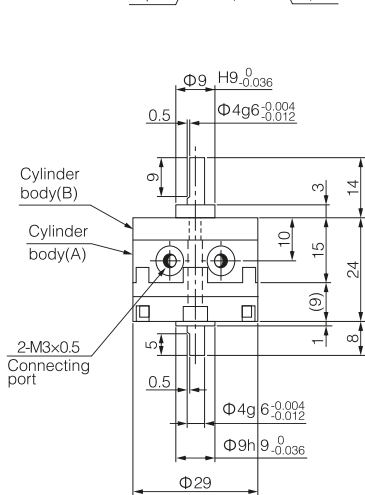
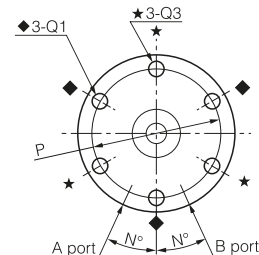
The port is on the side of the cylinder block



NCRB2BW10-□DE
Port in axial direction

NCRB2BW15 • 20 • 30-□D

The port is on the side of the cylinder block



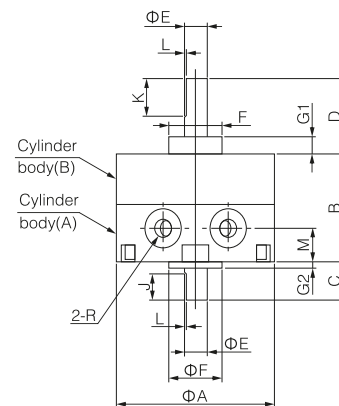
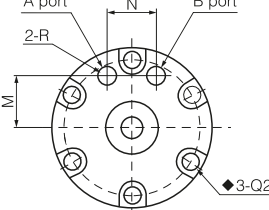
3- $\Phi 3.4$ (depth 15.5)
With side B of cylinder block
◆ thread through

6-M3×0.5 (depth 3)
For installation unit

3- Φ 3.4 (depth 15.5) /
With side B of cylinder block
◆ thread through

NCRB2BW15 · 20 · 30-□DE
Port in axial direction

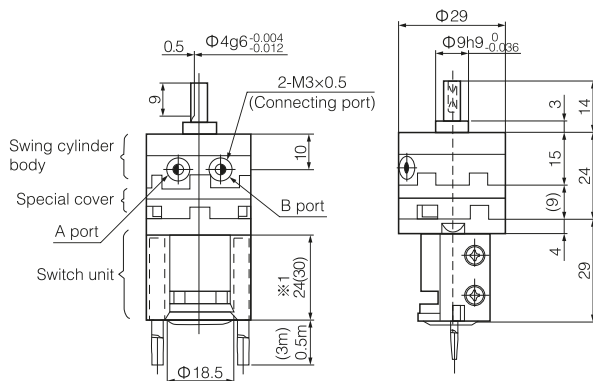
A port M



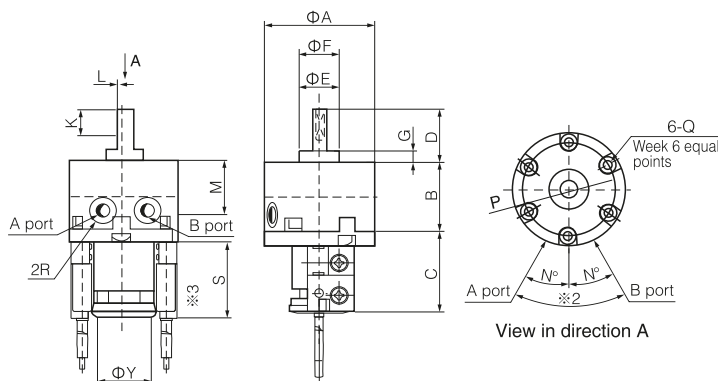
Model	A	B	C	D	E(g6)	F(h9)	G1	G2	J	K	L	M	N	P	Q(depth)			R	
															◆Q1	◆Q2	★Q3	90°	100°
NCRB2BWU15-□S	34	20	9	18	5 ^{-0.004} _{-0.012}	12 ⁰ _{-0.043}	4	1.5	6	10	0.5	5	25	29	M3 (10)	3.4 (6)	M3 (5)	M3	
NCRB2BWU15-□D												11	10						
NCRB2BWU20-□S	42	29	10	20	6 ^{-0.004} _{-0.012}	14 ⁰ _{-0.043}	4.5	1.5	7	10	0.5	9	25	36	M3 (13.5)	4.5 (11)	M4 (7.5)	M5	
NCRB2BWU20-□D												14	13						
NCRB2BWU30-□S	50	40	13	22	8 ^{-0.005} _{-0.014}	16 ⁰ _{-0.043}	5	2	8	12	1.0	10	25	43	M5 (18)	5.5 (16.5)	M5 (10)	M5	
NCRB2BWU30-□D												15.5	14						

With magnetic switch

NCDRB2BW10-□D



NCDRB2BW15 · 20 · 30-□D (Same size as single blade)



※ 1. 24: When using D-90, 90A, S99 (V), T99 (V), S9P (V) magnetic switch; 30: When D-97, 93A is used.

※2. 60°: When D90, 90A, 97, 93A are used; 69°: When using D-S99(V), T99(V), S9P(V).

※3. 25.5: When D-R73, R80, S79, T79, S7P magnetic switch and linear outgoing type are used: 34.5: When D-R73, R80, T79 magnetic switch and socket type are used.

Model	A	B	C	D	E(g6)	F(h9)	G	K	L	M	N	P	Q	R		S		Y	
														90°	100°				
NCDRB2BW15-□D	34	20	29	18	5	12	4	10	0.5	15	25	29	M3×0.5 depth 5	M3×0.5			24※1	30※1	18.5
NCDRB2BW20-□D	42	29	30	20	6	14	4.5	10	0.5	20	25	36	M4×0.7 depth 7	M5×0.8			25.5※1	34.5※1	25
NCDRB2BW30-□D	50	40	31	22	8	16	5	12	1	30	25	43	M5×0.8 depth 10	M5×0.8					28

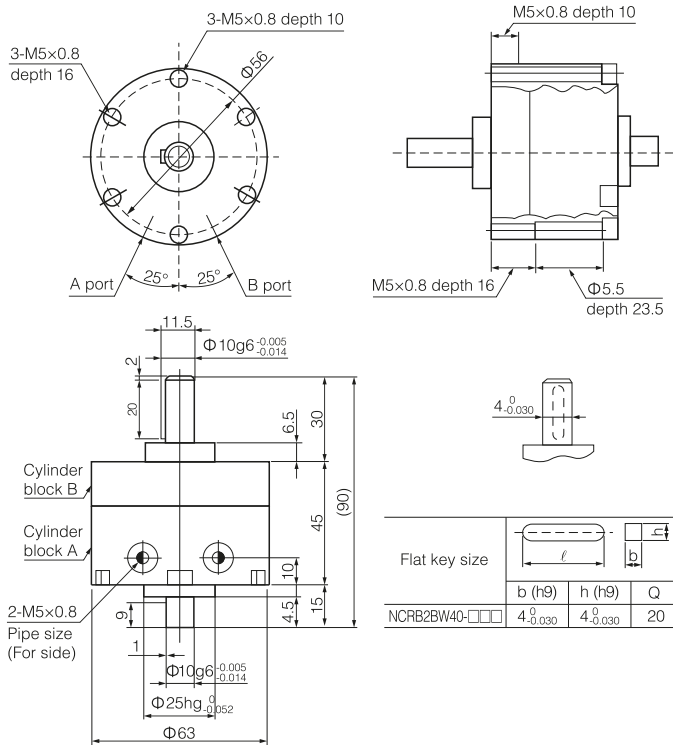
Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

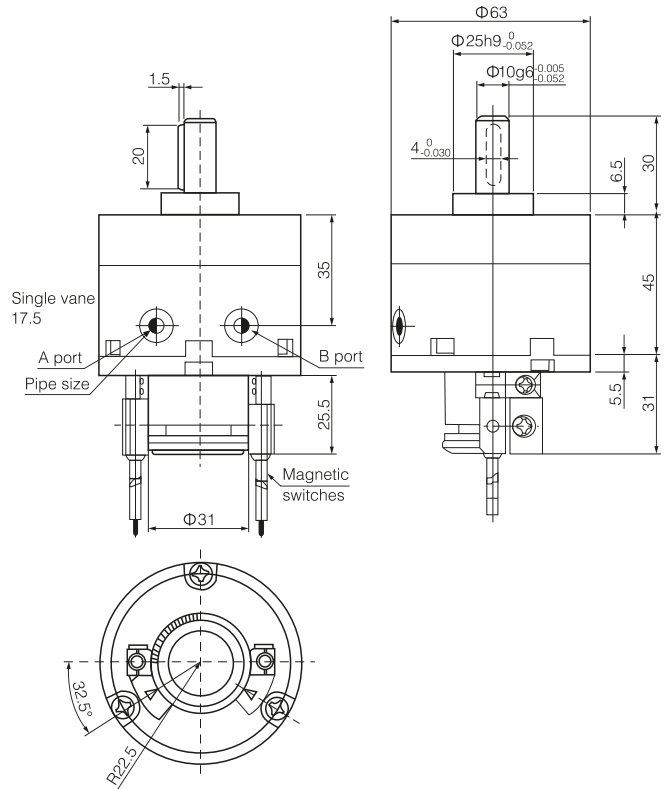
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMH22
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Standard type (NCRB2BW40-□S/D)

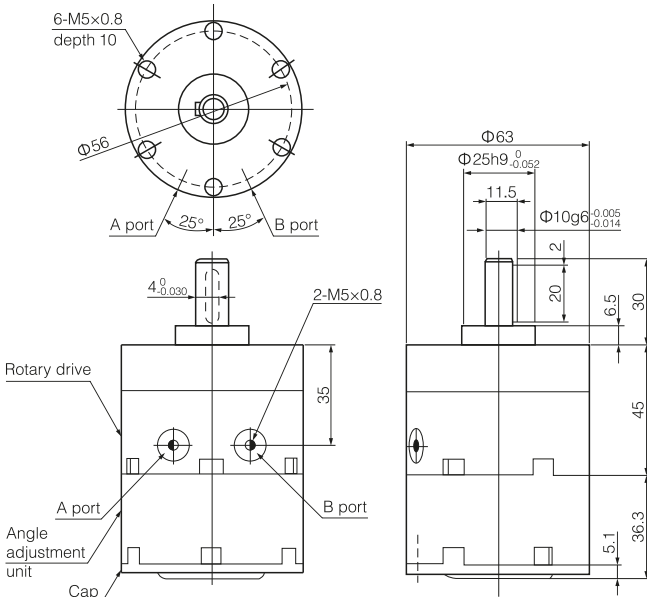


Built in magnetic ring (with switch)

(NCDRB2BW40-□S/D)



With angle adjuster (NCRB2BWU40-□S/D)



With angle adjuster (Built in magnetic ring)

(NCDRB2BWU40-□S/D)

